

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

REGENTS OF THE
UNIVERSITY OF MINNESOTA,

Plaintiff,

v.

AT&T MOBILITY LLC,

Defendant.

ERICSSON, INC., and NOKIA OF
AMERICA CORP.,

Defendants-Intervenors.

Civil Action No. 14-cv-4666 JRT-TNL

JURY TRIAL DEMANDED

REGENTS OF THE
UNIVERSITY OF MINNESOTA,

Plaintiff,

v.

SPRINT SPECTRUM L.P., et al.,

Defendants.

ERICSSON, INC., and NOKIA OF
AMERICA CORP.,

Defendants-Intervenors.

Civil Action No. 14-cv-4669 JRT-TNL

JURY TRIAL DEMANDED

REGENTS OF THE
UNIVERSITY OF MINNESOTA,

Plaintiff,

v.

T-MOBILE USA, INC.,

Defendant.

ERICSSON, INC., and NOKIA OF
AMERICA CORP.,

Defendants-Intervenors.

Civil Action No. 14-cv-4671 JRT-TNL

JURY TRIAL DEMANDED

REGENTS OF THE
UNIVERSITY OF MINNESOTA,

Plaintiff,

v.

CELLCO PARTNERSHIP
D/B/A VERIZON WIRELESS

Defendant.

ERICSSON, INC., and NOKIA OF
AMERICA CORP.,

Defendants-Intervenors.

Civil Action No. 14-cv-4672 JRT-TNL

JURY TRIAL DEMANDED

**DEFENDANTS' OPPOSITION TO PLAINTIFF'S MOTION FOR LEAVE TO
AMEND INFRINGEMENT CONTENTIONS**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	FACTUAL BACKGROUND.....	3
A.	Infringement and Non-Infringement Contentions Previously Served by the University and Defendants.....	3
B.	Claim Construction	5
C.	Regents’ Proposed Amendments	6
III.	LEGAL BACKGROUND	9
IV.	ARGUMENT AND AUTHORITIES.....	10
A.	Regents Had All the Evidence Needed to Supplement Its Infringement Contentions Over a Year Ago, and Was Not Diligent.....	11
1.	Technical Documents Cited in Regents’ Proposed Amendments Were Produced Over a Year Ago	11
2.	Regents Was Not Diligent in Supplementing Based on Defendants’ and Intervenors’ Non-Infringement Positions	19
3.	Regents Was Not Diligent in Amending in Response to the Court’s Claim Construction Order.....	20
4.	Regents Was Not Diligent in Moving to “Clarify” its Existing Allegations	23
B.	Regents’ Proposed Amendments Would Prejudice Defendants	23
C.	All Other Factors Support Denial	26
V.	CONCLUSION.....	26

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Bombardier Recreational Products, Inc., v. Artic Cat, Inc.</i> , Case No. 12-cv-2706, Dkt. 555 (D. Minn. Oct. 14, 2015)	10
<i>BookIT Oy v. Bank of Am. Corp.</i> , 817 F. App'x 990 (Fed. Cir. 2020) (<i>nonprecedential</i>)	22
<i>CellCast Techs., LLC v. United States</i> , 152 Fed. Cl. 414 (2021)	22
<i>CommScope Techs. LLC v. Dali Wireless, Inc.</i> , 2018 WL 4566130 (N.D. Tex. 2018).....	22
<i>Dynetix Design Solutions Inc. v. Synopsys Inc.</i> , No. 11-cv-05973-PSG, 2012 WL 6019898 (N.D. Cal. Dec. 3, 2012).....	25
<i>Google v. Netlist, Inc.</i> , No. C 08-4144.....	25
<i>Honeywell Int'l Inc. v. Furuno Elec. Co.</i> , No. 09-CV-3601, 2014 WL 12599633 (D. Minn. Jan. 29, 2014).....	9, 18, 25
<i>ICON Health & Fitness, Inc. v. Octane Fitness</i> , LLC, No. CIV09-319ADM/SRN, 2010 WL 1839321 (D. Minn. May 5, 2010).....	9, 17, 18, 26
<i>Icon-IP Pty. Ltd. v. Specialized Bicycle Components, Inc.</i> , No. 12-cv-03844-JST, 2014 WL 6879428 (N.D. Cal. Dec. 5, 2014)	24
<i>Karl Storz Endoscopy-Am. Inc. v. Stryker Corp.</i> , No. 14-cv-00876-RS (JSC), 2016 WL 7386136 (N.D. Cal. Dec. 21, 2016)	25
<i>Lockheed Martin Corp. v. Network Solutions, Inc.</i> , 194 F. 3d 980 (9th Cir. 1999)	24
<i>In re Milk Prods. Antitrust Litig.</i> , 195 F. 3d 430 (8th Cir. 1999)	24
<i>O2 Micro Intern. Ltd. v. Monolithic Power Sys., Inc.</i> , 467 F.3d 1355 (Fed. Cir. 2006).....	9, 10
<i>Sycamore IP Holdings LLC v. AT&T Corp.</i> , No. 2:16-CV-588-WCB, 2018 WL 1695231 (E.D. Tex. Apr. 6, 2018)	22

Symantec Corp. v. Acronis Corp.,
No. 11–cv–5310–EMC (JSC), 2013 WL 5368053 (N.D. Cal. Sept. 25, 2013).....25

Statutes

Rule 15(a).....24

I. INTRODUCTION

A month after the close of fact discovery, Regents asks the Court for extraordinary relief: to allow it to change the infringement theories under which the parties have spent the past eight years litigating. Allowing these new theories would prejudice Defendants and Intervenor, who over the course of *years* of hard-fought litigation have identified prior art, served invalidity contentions, targeted written discovery requests at, and developed deposition evidence based on Regents’ *original* infringement theories. Regents’ 11th hour change in theories comes after fact discovery has closed, after all four inventor depositions were taken, and at a time when Defendants and Intervenor have no practical ability to address Regents’ new theories. As this Court and others have long recognized, infringement contentions are “designed specifically to ‘require parties to crystallize their theories of the case early in the litigation,’” which serves to “efficiently focus and advance discovery” and “to prevent the shifting sands approach to claim construction.”

Regents makes two primary arguments to support its amended contentions. *First*, Regents says its new infringement theories are prompted by the Court’s claim construction ruling. But the Court’s claim construction order issued *four months ago*, and it includes no surprises—for certain terms the Court merely adopted Defendants’ proposed constructions that were first provided to Regents *six years ago*. Moreover, much of Regents’ belated doctrine of equivalents amendments try and avoid constructions Regents itself *agreed* to during the claim construction process. If Regents believed Defendants’ proposed construction justified new theories, the time to make its amendment was during claim construction briefing, which concluded in 2021. If Regents had diligently sought leave to

amend at that time, it would have given Defendants and Intervenor time to account for any new theories during the discovery process. But there is no excuse for waiting until after discovery closed to provide notice to Defendants and Intervenor of these new theories.

Second, Regents claims that its new theories are justified due to information obtained late in discovery. This is simply not true. Most of the documents Regents relies on for its new infringement theories were produced *years* ago. Even the allegedly “late” information was produced to Regents over *six* months ago, before the claim construction order was entered. Recognizing that this is fatal to its Motion, Regents tries to put the blame on Defendants/Intervenor for producing *too many documents*, which Regents suggests caused it to overlook the evidence related to its new theories.

Even if there were any truth to that claim—which there is not—it is a problem of Regents’ own making. Throughout discovery, Defendants and Intervenor have asked Regents to narrow the scope of this case and reduce its asserted claims to a manageable number. Regents has steadfastly refused. For the first several years of this litigation, Regents asserted more than 100 claims across five patents. It continues to assert 45 claims today, even after the Court ordered Regents to drop to 20 claims shortly after the close of fact discovery. Dkt. 189¹ at 7. Regents should not be permitted to complain about this case’s scope and complexity when it is the one who created the problem. *See* Dkt. 357 at 3 (“Plaintiff is reminded, however, of the Court’s prior admonition ‘that 45 claims or even 20 would impose a heavy burden on the parties and the Court’ and that Plaintiff must

¹ All docket citations herein refer to Civil Action No. 14-cv-4666 JRT-TNL.

therefore ‘utilize all opportunities to reduce such claims if and when reasonable.’”) (quoting Dkt. 189 at 7).

Finally, Regents misapprehends the prejudice issue by noting that “[n]o new patent claims are being added in the case, and no new products or services are being accused of infringement.” Mot. at 30. But the addition of new claims or products is not the problem. The problem is that Regents’ proposed amendments radically change the scope of the asserted claims. With fact discovery closed, invalidity contention deadlines having long since passed, and expert reports due seven days after the hearing on Regents’ Motion, Defendants will have no opportunity to address Regents’ newly raised theories. Its Motion should be denied.

II. FACTUAL BACKGROUND

A. Infringement and Non-Infringement Contentions Previously Served by the University and Defendants

Regents filed suit accusing Defendants AT&T Mobility LLC, Sprint Spectrum L.P., T-Mobile USA, and Cellco Partnership d/b/a Verizon Wireless (collectively, “Defendants”) of patent infringement in November 2014. Dkt. 1. Regents alleges that Defendants’ 4G LTE and 5G NR networks infringe U.S. Patent Nos. 7,251,768 (the “’768 Patent”; RE45,230 (the “’230 Patent”); 8,588,317 (the “’317 Patent”); 8,718,185 (the “’185 Patent”); and 8,774,309 (the “’309 Patent”) (collectively, “Asserted Patents”). *Id.* The Asserted Patents generally fall into two categories—the linear precoding patents (the ’768 and ’230 Patents) and the carrier frequency offset (“CFO”) patents (the ’309, ’317, and

'185 Patents). In early 2016, Ericsson, Inc., Nokia Solutions & Networks, and Alcatel Lucent USA² intervened. Dkts. 131, 136.

On June 6, 2016, Regents served its initial infringement contentions as required by the Court's First Amended Scheduling Order. Dkt. 133 at 5. These contentions only addressed Defendants' 4G LTE technology. On September 2, 2016, Defendants served non-infringement contentions explaining why their 4G LTE networks do not infringe the asserted patents.

In March 2017, Ericsson filed petitions for *inter partes* review ("IPR") challenging the validity of each Asserted Patent. Dkt. 220 at 6. Ericsson subsequently moved to stay pending resolution of the IPRs, which this Court granted. Dkt. 237 at 21-22. The Petitions were denied on procedural grounds without substantive review. Following the denial, the court lifted the stay and issued its Fourth Amended Scheduling Order dated December 31, 2020, which permitted Regents to add infringement theories as to Defendants' 5G NR telecommunications networks and Defendants to supplement their invalidity contentions to address these new theories. Dkts. 267 at 3. Defendants served supplemental invalidity contentions on June 2, 2021. *Id.* at 7. The Fourth Amended Scheduling Order did not, however, permit Regents to amend its 4G LTE infringement contentions. Dkt. 267.

Regents served its 5G NR infringement contentions on June 2, 2021. *See, e.g.*, Dkt. 396-8; *see also* Dkt. 395 at 3 (confirming service of Ex. L (Dkt. 396-8) on June 2, 2021). On September 2, 2021, Defendants served non-infringement contentions relating to their

² In late 2016, NSN and ALU merged. Nokia of America Corporation ("Nokia") is the successor to both entities.

5G networks. *See* Dkt. 267 at 7-8. Shortly thereafter, Regents sought to amend its infringement contentions as to Defendants’ 4G LTE networks. Defendants did not object on the condition that they be permitted to supplement responsive contentions. Regents and Defendants served their respective supplements on September 17, 2021 and January 14, 2022.

As to any doctrine of equivalents (“DOE”) theories, the Court ordered that “[i]f there is a contention by Plaintiff that there is infringement of any claims under the doctrine of equivalents, Plaintiff must separately indicate this on its claim chart and, in addition to the information required for literal infringement, Plaintiff must also explain each function, way, and result that it contends are equivalent, and why it contends that any differences are not substantial.” Dkt. 267 at 7. It further stated that Regents would only be permitted to amend its infringement claim charts “by leave of the Court for good cause shown.” *Id.*

B. Claim Construction

Claim construction began in 2016. The parties exchanged proposed terms for construction on November 9, 2016, and exchanged constructions on December 2, 2016. In their December 2016 submission, Defendants proposed that the correct construction of the “matrix multiplication” terms³ required that the claimed “[m]atrices must be applied in the recited order.” Ex. A at 8. Defendants also proposed that the order of operations in the ’768 Patent claims was limiting, *i.e.*, that the output of the “bit interleaver” is input to the

³ “wherein the first matrix is based on a Fast Fourier Transform (FFT) matrix, and wherein the second matrix is based on a diagonal matrix” and “wherein the first matrix is a matrix of size $N_{tx} \times N_t$... wherein the second matrix is a diagonal matrix.”

“mapping unit,” whose output is input to the “precoder,” and so on. *Id.* at 4. The parties completed claim construction briefing on April 13, 2017, but a Markman hearing did not take place prior to the stay.

When the stay lifted, the parties engaged in a second round of claim construction, again exchanging claim terms for construction and their respective positions on the proper construction of those terms in Fall 2021. Dkt. 298. As to the “matrix multiplication” terms, Defendants maintained their pre-stay position that the order of multiplication of the claimed matrices must be applied in the order recited in the claims. *Id.* Defendants also reiterated the order of operations in the ’768 Patent claims was limiting. Regents agreed that the ’768 Patent claims include components that perform corresponding functions, which must be performed in the order recited. Dkt. 298. The parties completed their second round of Markman briefing in December 2021, and the Court held a Markman hearing on March 14, 2022. Dkts. 304-310, 311-313, 325.

On August 5, 2022, the Court issued its claim construction ruling. Dkt. 342. As to the “matrix multiplication” terms, the Court rejected Regents’ proposal and adopted the exact constructions proposed by Defendants in 2017 and again in 2021. *Compare id. with* Dkt. 298.

C. Regents’ Proposed Amendments

On November 18, 2022, at 5:07 PM on the day fact discovery closed, Regents informed Defendants that it intended to seek leave to amend its infringement contentions for the linear precoding patents ostensibly “in view of (a) the court’s claim construction and (b) evidence developed in discovery.” Dkt. 395-2 (Email thread between counsel for

the parties) at ECF Page 4. Regents offered no justification for its delay in proposing these amendments months after the Court issued its claim construction order and only hours before the close of discovery. Regents then waited to file its Motion until the last day it could do so under the Scheduling Order. *See* Dkt. 357 (Eighth Amended Scheduling Order) at 11 (setting December 16, 2022 as the deadline for non-dispositive motions). The hearing on Regents' Motion is set for January 26, 2022, seven days before the parties' opening expert reports are due. Dkt. 393 (Notice of Hearing); Dkt. 357 (Eighth Amended Scheduling Order) at 6 (setting February 3, 2022 as the opening expert report deadline).

In its Motion, Regents seeks to amend its:

- 4G LTE contentions as to the '768 Patent,
- 4G LTE contentions as to the '230 Patent, and
- 5G NR contentions as to the '230 Patent.

See Dkt. 392, Exs. A-C. For the '768 Patent, Regents lists the following modifications to its infringement contentions:

- pp. 7 (scaling factor), 12-13 (scaling factor), 15-16 (symbol interleaver positioning); 23-24 (unitary matrix);⁴ and
- pp. 7-9 (interleaver).⁵

⁴ Mot. at 18 (alleging these modifications were necessitated by Defendants' non-infringement arguments).

⁵ Mot. at 20 (alleging these modifications "clarify the mapping of claim terms to the 4G standard").

For the '230 Patent, Regents lists the following modifications with respect to 4G LTE:

- pp. 26-27, 43;⁶
- pp. 7 (scaling factor), 27-28 (scaling factor), 40-41 (unitary matrix), 62 (unitary matrix);⁷
- pp. 44, 48 (order of operations for matrix multiplication);⁸ and
- pp. 7-8 (interleaver).⁹

Lastly, Regents lists the following modifications with respect to 5G NR for the '230 Patent:

- pp. 9, 13, 22-41, 47, 50-64, 66-76, 92-98, 99-101;¹⁰
- pp. 64-65 (order of operations for matrix multiplication);¹¹ and
- pp. 7-8 (interleaver).¹²

Despite Regents' claims that these amendments are necessitated by recent discovery or the Court's claim constructions, Regents' proposed amendments address information that was produced to Regents many months, if not years ago. Regents was therefore not

⁶ Mot. at 16 (allegedly needed to address "documents received after [Regents] served its prior contentions).

⁷ Mot. at 18 (alleging these modifications were necessitated by Defendants' non-infringement arguments).

⁸ Mot. at 19.

⁹ Mot. at 20 (alleging these modifications "clarify the mapping of claim terms to the 4G standard").

¹⁰ Mot. at 16 (allegedly needed to address "documents received after [Regents] served its prior contentions).

¹¹ Mot. at 19.

¹² Mot. at 20 (alleging these modifications "clarify the mapping of claim terms to the 4G standard").

diligent in supplementing its contentions. Furthermore, Regents' late supplements are prejudicial to Defendants, as Defendants now lack the opportunity to address these new theories and evidence through fact discovery. For both of these reasons, Regents' Motion should be denied.

III. LEGAL BACKGROUND

The Court's pretrial scheduling order "sets forth the deadline by which a party must serve its claim chart, and accompanying infringement contentions, on the opposing party." *Honeywell Int'l Inc. v. Furuno Elec. Co.*, No. 09-CV-3601 (MJD/TNL), 2014 WL 12599633, at *2 (D. Minn. Jan. 29, 2014). Motions to amend infringement contentions are thus "treated like motions to modify a pretrial scheduling order." *Id.* This Court requires a showing of "good cause" for amendment of a pretrial scheduling order. *Id.* In the context of patent cases, the issue central to determining whether a plaintiff can show good cause to amend its infringement contentions is whether the plaintiff was diligent in seeking the proposed amendments. *Id.* Indeed, as the Federal Circuit has noted, "[i]f the parties were not required to amend their contentions promptly after discovering new information, the contentions requirement would be virtually meaningless as a mechanism for shaping the conduct of discovery and trial preparation." *O2 Micro Intern. Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1366 (Fed. Cir. 2006). Other factors considered by the Court include the amendments' importance, potential prejudice as a result of the amendments, and availability of a continuance to address any prejudice. *Honeywell*, 2014 WL 12599633, at *2; *see also ICON Health & Fitness, Inc. v. Octane Fitness, LLC*, No. CIV09-319ADM/SRN, 2010 WL 1839321, at *1 (D. Minn. May 5, 2010).

IV. ARGUMENT AND AUTHORITIES

The Court should deny Regents’ Motion because Regents was not diligent, Defendants would be unduly prejudiced if the Motion is granted, and all other factors support denial. Regents attempts to distract from these issues by noting that it “was required to make its initial infringement contentions early in the discovery period, prior to any meaningful opportunity to take” discovery, without the benefit of Defendants’ non-infringement contentions, and before claim construction. Mot. at 23-24. But that is precisely the point of infringement contentions. Claim charts are “designed specifically to ‘require parties to crystallize their theories of the case early in the litigation’ so as to ‘prevent the shifting sands approach to claim construction.’” *O2 Micro*, 467 F.3d at 1364 (citing *Atmel Corp. v. Info. Storage Devices, Inc.*, No. C 95-1987 FMS, 1998 WL 775115, at *2 (N.D. Cal. Nov. 5, 1998)). “By identifying and solidifying theories of liability early in litigation, claim charts clarify infringement contentions, and, as a direct result, serve to efficiently focus and advance discovery.” *Bombardier Recreational Products, Inc., v. Artic Cat, Inc.*, Case No. 12-cv-2706 (ADM/LIB), Dkt. 555 at 23 (D. Minn. Oct. 14, 2015).

And in any event, even if Defendants’ non-infringement contentions, document productions, or the Court’s claim construction order *did* provide good cause for Regents to amend its contentions, Regents does not explain why it waited until the *very close of discovery* to seek leave to amend. Regents has been in receipt of relevant discovery, Defendants’ non-infringement contentions, and the Court’s Markman order (not to mention Defendants’ claim construction positions) for a significant period of time. Regents makes no credible attempt to explain its delay because none exists. Its Motion should be denied.

A. Regents Had All the Evidence Needed to Supplement Its Infringement Contentions Over a Year Ago, and Was Not Diligent

Regents advances four arguments for why it was diligent in amending its contentions, and all four fail for similar reasons. Each ground that Regents offers as the basis for its amendment has been known to Regents for months at the least. *First*, Regents was not diligent in attempting to amend its contentions until the very end of fact discovery—over eight years after this case was filed and almost three years after the stay was lifted. Each of the documents cited in its proposed supplements was produced more than six months before Regents even approached Defendants regarding supplementation. Most were produced more than a year before. *Second*, Regents was not diligent in addressing Defendants’ non-infringement allegations which were first proffered over six years ago. *Third*, Regents was not diligent in addressing the Court’s claim construction order, which issued over four and a half months ago, and relates to claim construction positions first raised in early 2017. *Fourth*, Regents was not diligent in amending its contentions to add so-called “clarifying details” that have been known to Regents since **2017** and present new theories of infringement. Because Regents has not been diligent with respect to any of its amendments, Regents’ Motion should be denied.

1. Technical Documents Cited in Regents’ Proposed Amendments Were Produced Over a Year Ago

Regents fails to credibly explain why it waited until November 18, 2022—the last day of fact discovery—to notify Defendants that it planned to supplement its infringement contentions to include references to documents it received no later than May 4, 2022. Regents received each document on which it relies in its proposed amended claim charts,

or an identical version of that document, at least six months before the close of fact discovery:

Document Number	Date of Production
NSNRUM-00562308	September 8, 2021
NSNRUM-00578514	Feb. 15, 2022
NSNRUM-00574494	Feb. 15, 2022
NSNRUM-00571825	Feb. 15, 2022
NSNRUM-00575581	Feb. 15, 2022
NSNRUM-00583219	May 4, 2022
NSNRUM-00597535	May 4, 2022 ¹³
ERIC RUM00597019	July 30, 2021
ERIC RUM00598957	Sept. 2, 2021
ERIC RUM00599382	Sept. 2, 2021
ERIC RUM00972792	July 22, 2022 ¹⁴
ERIC RUM00975333	July 22, 2022 ¹⁵

All but one of the documents that Regents relies on in its proposed supplementation was thus available to Regents by February 15, 2022, at the latest. Most were available in 2021. The one document provided after February 15, 2022, NSNRUM-00583219, was provided

¹³ The information cited in this document regarding the Nokia precoding matrices (*see, e.g.*, Dkt. 396-4 (Ex. G) at 26) was provided at NSNRUM-00560218 at pages 66 and 67. *See* Ex. B. This document was produced on August 16, 2021, nine months earlier than the document Regents claims justifies its last-minute amendment.

¹⁴ A version of this document was produced at ERIC_RUM00587611 in early 2021 and is cited in Regents' initial 5G NR contentions. *See* Dkt. 396-2 (Regents' Proposed Amended 5G Infringement Contentions for the '230 Patent) at 8, 22, 26, 55, 56, and 60 (citing ERIC_RUM00587611 without redlines).

¹⁵ A version of this document was produced at ERIC_RUM00597238 on July 30, 2021. Ericsson identified this prior version of the document in response to a Regents interrogatory asking Ericsson to identify the precoding methods and matrices used in Ericsson's 5G products. Ex. C (Ericsson's July 30, 2021 Second Supplemental Objections and Responses to Plaintiff's Second Set of Individual Interrogatories) at PDF Page 7.

on May 4, 2022, more than six months before Regents even raised the issue of supplementing its infringement contentions.

Regents blames its failure to timely move to amend its infringement contentions on the alleged difficulties it experienced reviewing “hundreds of thousands of pages of technical documents” produced by Defendants and Intervenor, inspecting source code, and conducting technical depositions. Mot. at 24-25. These excuses are red herrings—Regents’ proposed amendments provide for no distinction between accused instrumentalities, cite zero source code, and refer to not a single line of testimony from any of Defendants’ or Intervenor’s witnesses. Indeed, Regents has not reviewed any Ericsson or Nokia source code since July 2022. *See, e.g.*, Ex. D (Ericsson source code log).

In any event, the volume of evidence produced in this case is a problem of Regents’ own making. From the outset, Regents chose to maintain multiple infringement reads against four separate defendants, based on both the LTE and 5G networks, initially asserting 129 claims across five patents. Today Regents continues to assert 45 claims, even after Defendants requested that Regents narrow the scope of its case in accordance with the Scheduling Order. *See supra* § I (noting Regents’ refusal to narrow claims). Regents also chose to press Defendants and Intervenor to produce massive amounts of irrelevant or duplicative documents in response to Regents’ broad discovery requests. Exs. E-F. Thus, Regents’ complaints that it could not review the “hundreds of thousands of pages of technical documents” produced in this case in a reasonable time are a problem of its own creation and do not support Regents’ untimely supplementation. Mot. at 24.

Further, Regents' complaint about the timing of the depositions of certain of Intervenor's witnesses is entirely without merit. Intervenor provided more than a dozen 30(b)(6) witnesses in response to Regents' 106 topics. *See, e.g.*, Ex. G (Plaintiffs' Amended Notice of 30(b)(6) Deposition of Ericsson); Ex. H (Plaintiff's Second Notice of 30(b)(6) Deposition of Ericsson). Intervenor began providing these witnesses more than a year before the close of fact discovery. For example, Regents deposed Dr. Stefan Parkvall from Ericsson in September 2021 regarding numerous technical topics, including regarding the precoders incorporated into the accused standards. *See, e.g.*, Ex. I (Parkvall Dep. Tr.) at 181:9-188:11.

While some of Intervenor's 30(b)(6) witnesses sat for depositions shortly before the close of fact discovery, that was not unique to Intervenor. The vast majority of Regents' own witnesses sat for deposition in the last few weeks of fact discovery. In any event, the timing of these depositions is irrelevant because Regents fails to identify what information in its proposed supplements was made known only through the depositions of Nokia's and Ericsson's technical witnesses. Indeed, Regents fails to cite to any witness testimony in its proposed supplements at all.

While Regents claims it needed these depositions to understand the "specific precoding and other digital signal processing algorithms" used by the Intervenor to implement LTE-Advance and 5G NR, Mot. at 12-13, Regents merely feigns ignorance. In reality, Regents has long-since understood Intervenor's implementation of the relevant precoding and digital signal processing algorithms because Regents served several interrogatories directly targeted at these issues. For example, in its Individual Interrogatory

No. 1 to Ericsson, Regents asked Ericsson to identify its source code implementing the LTE Physical Layer Specification features relevant to the '230 and '768 patents, down to the file and function name:

For each of your products that are either used or sold for use in any of the Defendants' LTE Networks, separately identify the source code, by version, directory, file, and function, related to the implementation of the LTE Physical Layer Specifications in your products, including at least the error correction coding described in 36.212 section 5.1.3, the sub-block interleavers described in 36.212 sections 5.1.4.1.1 and 5.1.4.2.1, the bit collection, selection and transmission described in 36.212 sections 5.1.4.1.2 and 5.1.4.2.2, the scrambling described in 36.211 sections 6.3.1 and 6.8.2, the modulation mapping described in 36.211 sections 6.3.2, 6.8.3, and 7.1

([REDACTED]), the layer mapping described in 36.211 sections 6.3.3.1, 6.3.3.3 and 6.8.4, the precoding for transmit diversity described in 36.211 sections 6.8.4 and 6.3.4.3, the mapping to resource elements described in 36.211 sections 6.3.5 and 6.8.5, and the precoding for large delay CDD described in 6.3.4.2.2 of 36.211, the determination of the number of layers to be used in spatial multiplexing with large delay CDD, as described in section 6.3.4.2.2 of 36.211, and the mapping of reference signals to resource elements described in section 6.10.1.2 of 36.211 (including the requirement that "Resource elements (k,l) used for reference signal transmission on any of the antenna ports in a slot shall not be used for any transmission on any other antenna port in the same slot and set to zero.").

Ex. J (Plaintiff's First Set of Individual Interrogatories to Ericsson) at 6-7.

Ericsson fully responded to this interrogatory by January 14, 2022. *See* Ex. K (Ericsson's First Supplemental Objections and Responses to Plaintiff's First Set of Individual Interrogatories) at PDF Pages 5-14 (listing the source code files implementing various LTE features, including the precoding features Regents now claims not to have understood until the last day of fact discovery). For 5G NR, Ericsson similarly identified source code implementing the relevant precoding features and numerous documents describing the operation of this source code in response to other interrogatories from

Regents. *See, e.g.*, Ex. L (Ericsson’s May 21, 2021 First Supplemental Objections and Responses to Plaintiff’s Second Set of Individual Interrogatories) at PDF Pages 8-9 (providing a supplemental response to Plaintiff’s Individual Interrogatory No. 3), 20 (providing a supplemental response to Plaintiff’s Individual Interrogatory No. 8); *see also* Ex. C (Ericsson’s July 30, 2021 Second Supplemental Objections and Responses to Plaintiff’s Second Set of Individual Interrogatories) at PDF Pages 6-7 (providing a second supplemental response to Plaintiff’s Individual Interrogatory No. 8).

Nokia was served identical interrogatories and provided similar responses months ago. For instance, Nokia responded to Regents’ Individual Interrogatory Nos. 1 and 2 directed to LTE technology with specific source code modules and filenames on January 28, 2022. *See* Ex. M (Nokia’s Suppl. Responses to Regents’ Individual Interrogatory Nos. 1 and 2) at 10-23. Nokia also provided responses to Regents’ 5G directed interrogatories with source code level detail on January 27, 2022. *See* Ex. N (Nokia Suppl. Responses to Regents’ Individual Interrogatory Nos. 3, 5-9) at 10-16.

As its own Motion acknowledges, Regents’ technical experts spent more than 450 hours reviewing Intervenor’s source code, all with the benefit of these explanatory interrogatory responses while they did so. Yet, Regents cites no source code in any of its proposed amendments. Regents also does not identify a single piece of information that it learned during Intervenor’s 30(b)(6) depositions that it did not already possess via Intervenor’s interrogatory responses and document productions.

Next, Regents claims that denying its Motion would “deny the University a meaningful opportunity to use” information available to it for months or years “to support

its infringement case.” But that misses the point. Regents was free to seek leave at any point during discovery to supplement its contentions, subject to a showing of “good cause.” Yet Regents waited until the last possible moment—without any explanation as to why—to raise the issue. Granting Regents’ Motion would incentivize patent owners to unreasonably delay supplementing infringement contentions until late in the case, precluding accused infringers from developing responsive non-infringement, claim construction, and invalidity arguments.¹⁶

Regents’ cited cases do little to advance its arguments. In *ICON*, Octane sought leave to amend just three months after it served preliminary infringement contentions and shortly after it learned of additional evidence in support of its infringement theories. 2010 WL 1839321 at *3. Here, Regents has been in possession of the documents it seeks to add for at least six months, and some well over a year. Additionally, despite plaintiff’s diligence, the Court in *ICON* recognized the prejudice to *ICON*, and permitted *ICON* to supplement its invalidity contentions and submit new claim construction briefing. *Id.* A

¹⁶ “The nature of a patent infringement claim or invalidity defense encourages strategies to delay producing information through discovery or otherwise until the opposing side has disclosed the basis for its claims, contributing to lengthy delays and high costs. One approach is for the court to require the parties to submit detailed statements of their claims and defenses early in the litigation either at the outset of the case, as part of a discovery scheduling order, or, where the accused product is unavailable or otherwise not subject to examination, following limited discovery. The plaintiff’s statement is generally expected to contain a detailed explanation of the infringement contentions perhaps through an element-by-element claims chart for each infringement claim asserted. The claims chart’s purpose is to specify how each element of a claim is present in or ‘reads on’ the allegedly infringing product or process. The defendant similarly would be required to respond in a corresponding level of detail, including disclosures of all prior art relied upon to support challenges to the patent’s validity.” 26 Fed. Proc., L. Ed. § 60:1156 Pretrial Conferences and Orders.

similar course of action in this case would force Defendants to invest considerable time, resources, and money, and delay resolution of this case by several months. This stands in stark contrast to Regents' claim that "granting the University's motion will not delay the case or cause an alternation to another case deadline." Mot. at 31.

Requests to amend in *Honeywell* and *3M Innovative Properties Co. v. Tredegar Corp.* led to similar results, with the courts in those cases adjusting the pretrial schedules to allow defendants to assert invalidity contentions with respect to any supplemental infringement contentions and restart the claim construction process. 2014 WL 12599633 at *2; No. 09-03335 (DWF/AJB), 2011 WL 13141018, at *1 (D. Minn. Apr. 5, 2011). Additionally, the moving parties in both *Honeywell* and *3M* sought leave early in their cases. In *Honeywell*, the moving party sought leave just after the parties submitted their Joint Claim Construction Statement, and in *3M* defendant Tredegar sought leave months before the close of fact discovery. *Honeywell*, 2014 WL 12599633, at *2; *3M*, 2011 WL 13141018, at *3.

Lastly, *Polaris Indus. Inc. v. CFMOTO Powersports, Inc.*, is not relevant. In that case the Court addressed a potential amendment to cover a new product released during the pendency of the lawsuit. No. 10-CV-4362 (JNE/HB), 2014 WL 12755025, at *1 (D. Minn. Sept. 25, 2014). Regents admits its amendments accuse no new infringing products or services. Mot. at 1.

Because Regents was not diligent in supplementing its contentions based on evidence produced after service of its initial contentions, Regents' Motion should be denied.

2. Regents Was Not Diligent in Supplementing Based on Defendants' and Intervenor's Non-Infringement Positions

Regents' Motion identifies several non-infringement positions its proposed supplements allegedly address, but fails to note that the vast majority of these non-infringement positions were disclosed in *September 2016*, while several others were disclosed in 2017 or in direct response to Regents' supplemental LTE contentions served in late 2021. For example, Regents seeks to add the argument that the accused base stations use a "finite alphabet" in response to [REDACTED] [REDACTED]. Mot at 18. But Defendants disclosed these non-infringement positions in *September 2016*. Ex. O at 2. The proposed amendments cite no newly discovered evidence regarding the actual implementation of [REDACTED] [REDACTED]. See, e.g., Dkt. 392, Ex. F at 7-9. Instead, the amendments advance a multi-page doctrine of equivalence ("DOE") argument for the first time. Similarly, Regents seeks to amend its 4G LTE contentions to include new arguments that certain "[t]ransmit diversity matri[ces]" are "unitary matri[ces]." Dkt. 392, Ex. A at 23-24; *id.*, Ex. B at 40-41, 62. Again, Defendants disclosed their position that [REDACTED] [REDACTED] in *September 2016*. Ex. O at 7. Like the "finite alphabet" amendments discussed above, Regents cites no newly discovered evidence and instead advances a previously undisclosed DOE argument. See Dkt. 392, Ex. A at 23-24; *id.*, Ex. B at 40-41. Regents' proposed amendments as to the "symbol interleaver" limitation share a similar history. Defendants' non-infringement positions with respect to this limitation were disclosed *September 2016*,

and Regents' proposed amendment contains no information regarding the actual implementations of the accused systems. *See* Dkt. 392, Ex. A at 15-16.

Instead, Regents now seeks to overcome these non-infringement arguments by broadly expanding the scope of the claims under the guise of DOE. Had Regents timely disclosed these infringement theories, Defendants could have relied on different prior art that met the claim limitations in a similarly broad manner. Regents precluded Defendants from being able to assert this additional prior art by waiting to seek leave to amend until the last day of fact discovery. Regents also prevented Defendants from questioning the named inventors about these newly disclosed DOE theories at their depositions.

Regents therefore cannot reasonably claim that it needed to wait until the close of fact discovery to amend its contentions to address Defendants' non-infringement positions, and this Court should find that Regents was not diligent.

3. Regents Was Not Diligent in Amending in Response to the Court's Claim Construction Order

This Court issued its claim constructions on August 5, 2022. Dkt. 342. But the parties began the claim construction process long before then. As noted above (*supra* § II.B.), the parties engaged in the full claim construction process prior to the stay. And during that process, Defendants proposed constructions for the "matrix multiplication" terms that required that the "matrices must be applied in the recited order." Dkt. 214. Defendants' opening brief confirmed its positions with respect to these terms. *Id.* at 25-26. Defendants' positions with respect to these terms remained the same after the stay, and after Regents served its 5G NR and amended 4G LTE infringement contention. *Compare*

id. with Dkt. 306. Though Regents may disagree with the Court regarding the ultimate construction of these terms—which requires that the claimed matrix multiplications be performed in the order in which they are claimed—Regents cannot feign surprise that these terms were construed the way they were—in accordance with the proposed constructions Defendants had been advancing since 2017. *See* Dkt. 214. This is the classic case of buyer’s remorse: Regents backed the wrong claim construction, choosing to only advance infringement theories under its proposed construction, lost, and now seeks to revive its infringement case at the final hour by proposing supplements that allege that Defendants would still infringe even if the matrix multiplications were performed in a different order under the doctrine of equivalents. Dkt. 392, Ex. A at 23-24; *id.*, Ex. B at 40-41, 62.

Furthermore, many of Regents’ proposed belated DOE amendments simply attempt to side step claim constructions Regents’ itself agreed to during claim construction. For instance, for the ’768 patent, Regents adds DOE arguments addressing the order of operations performed in the claims. *See* Dkt. 396, Ex. F at 7-9. But during claim construction, Regents agreed that the ’768 Patent claims include components that perform corresponding functions, which must be performed in the order recited. Dkt. 298. Regents cannot now use the doctrine of equivalents to sidestep limitations it already agreed to in order to expand the scope of the claims.

Several courts have permitted amendment “only if the movant can show that the claim construction adopted by the court was unexpected or unforeseeable.” *CommScope Techs. LLC v. Dali Wireless, Inc.*, 2018 WL 4566130, at *3 (N.D. Tex. 2018) (citations omitted); *see also Sycamore IP Holdings LLC v. AT&T Corp.*, No. 2:16-CV-588-WCB,

2018 WL 1695231, at *4 (E.D. Tex. Apr. 6, 2018) (“courts in the Eastern District of Texas have uniformly required the movant to show that the claim construction adopted by the court was unexpected or unforeseeable.”) (internal quotations omitted); *BookIT Oy v. Bank of Am. Corp.*, 817 F. App'x 990, 994 (Fed. Cir. 2020) (*nonprecedential*) (“The district court reasonably found that BookIT lacked a good faith belief that its amendment was required by the court's claim construction order because the constructions adopted by the court did not differ in any material way from those proposed by Bank of America”). Because this Court adopted a construction that Defendants had advanced for *years*, this Court should likewise reject Regents’ attempts to supplement based on an unexpected claim construction.

Regents’ cited cases are again unavailing. In *CellCast Techs., LLC v. United States*, 152 Fed. Cl. 414, 427 (2021), the accused infringer admitted that patent owner was diligent by providing notice four days after claim construction order of its intent to amend. Here, Regents waited over three and a half months to raise the issue. In *FOX Factory, INC. v. SRAM, LLC*, patent owner did not seek leave to amend its contentions in response to a claim construction at all, but instead sought leave to respond to new non-infringement and invalidity theories advanced by the accused infringer. No. 18-CV-00127-WJM-NYW, 2018 WL 11025749, at *2 (D. Colo. Mar. 15, 2018). In *Nexus Display Techs., LLC v. LG Elecs., Inc.*, Nexus shared its amended infringement contentions with LG less than four weeks after the court issued its claim construction order, not three and a half months and on the eve of the close of discovery as Regents did here. No. CV1405694JVSDFMX, 2016 WL 6916827, at *2 (C.D. Cal. July 8, 2016). And in *Cell & Network Selection LLC v.*

AT&T Inc., patent owner served its infringement contentions prior to the close of discovery, so defendants had an opportunity to conduct discovery and prepare defenses based on the amended contentions. No. 6:13-CV-403, 2014 WL 10727108, at *4 (E.D. Tex. Nov. 10, 2014).

Because Regents fails to explain why it waited until the end of discovery to amend its contentions, despite knowing Defendants' claim construction positions for years and the Court's claim constructions for months, Regents' Motion should be denied.

4. Regents Was Not Diligent in Moving to "Clarify" its Existing Allegations

Regents' arguments with respect to its new "clarifying details" are inaccurate and misleading. *First*, Regents' new arguments with respect to the "scrambling" step are directly responsive to non-infringement positions Defendants advanced in **2017**, and do not reference any details at all about the specific functions of Ericsson's and/or Nokia's base stations, and are therefore untimely. *See* Dkt. 395, Ex. A at 7-9; *id.*, Ex. B at 7-8; *id.* Ex. C at 7-8. *Second*, Regents' new infringement theories are more than just mere "clarification[s]," but are a necessity in light of the Court's claim construction requiring that the steps recited in the '768 Patent claims be performed in their stated order. Dkt. 342. Regents' Motion should therefore be denied.

B. Regents' Proposed Amendments Would Prejudice Defendants

Regents contends that there is no prejudice to Defendants because "[n]o new patent claims are being added in the case, and no new products or services are being accused of infringement." Mot. at 30. But the addition of new claims or products is not the only source

of prejudice here. Regents’ proposed amendments radically change the scope of the asserted claims and advance new, previously undisclosed theories of infringement. Had Regents timely disclosed these positions, Defendants could have searched for and asserted other prior art consistent with Regents’ new interpretation of its claims. Defendants also could have investigated and developed alternative theories of non-infringement. And Defendants would have pursued different lines of questioning during the depositions of linear precoding patents’ inventors that took place over the past twelve months. But Defendants have been robbed of any opportunity to develop any of these defenses because Regents waited until discovery closed to provide notice of its new infringement theories.

Unsurprisingly, courts routinely find prejudice to defendants in similar circumstances. *See In re Milk Prods. Antitrust Litig.*, 195 F. 3d 430, 438 (8th Cir. 1999) (holding the need to reopen discovery is “precisely the sort of prejudice that justifies denial of a motion to amend under Rule 15(a).”); *Lockheed Martin Corp. v. Network Solutions, Inc.*, 194 F. 3d 980 (9th Cir. 1999) (“A need to reopen discovery and therefore delay the proceedings supports a district court’s finding of prejudice from a delayed motion to amend the complaint.”); *Icon-IP Pty. Ltd. v. Specialized Bicycle Components, Inc.*, No. 12–cv–03844–JST, 2014 WL 6879428, at *3-4 (N.D. Cal. Dec. 5, 2014) (denying motion to amend contentions finding prejudice because amendment was sought at “late stage in litigation” after close of fact discovery and weeks before submission of opening expert reports); *Symantec Corp. v. Acronis Corp.*, No. 11–cv–5310–EMC (JSC), 2013 WL 5368053, at *8 (N.D. Cal. Sept. 25, 2013) (finding prejudice to amend contentions when fact discovery had closed and expert discovery was underway); *Dynetix Design Solutions Inc. v. Synopsis*

Inc., No. 11–cv–05973–PSG, 2012 WL 6019898, at *3 (N.D. Cal. Dec. 3, 2012) (finding prejudice where new contentions were added after the claim construction ruling and would expand the case substantially); *Google v. Netlist, Inc.*, No. C 08–4144 SBA, 2010 WL 1838693, at *3 (N.D. Cal. May 5, 2010) (denying motion for leave to amend contentions because allowing amendment after close of discovery would cause prejudice by necessitating reopening discovery and potentially require additional claim construction proceedings). In sum, discovery is closed and Defendants now have no opportunity to respond to Regents’ new interpretation of its claims. Defendants are also deprived of the opportunity to evaluate and produce evidence that supports any new, responsive non-infringement positions. *Karl Storz Endoscopy-Am. Inc. v. Stryker Corp.*, No. 14-cv-00876-RS (JSC), 2016 WL 7386136, at *3 (N.D. Cal. Dec. 21, 2016) (“Prejudice is typically found when amending contentions stand to disrupt the case schedule or other court orders.”).

Conversely, the authority the University relies on is simply inapplicable to the facts in this case. As discussed above (§ IV.A.1), Regents’ cited references address situations in which fact discovery had not yet closed, or the case was in an early stage permitting an adjustment to the schedule to allow the accused infringers to present rebuttal argument and perform relevant discovery. *See* Section IV(A)(1) (distinguishing *Polaris*, *Honeywell*, *3M*, *Nexus Display*, and *ICON*). But here, fact discovery has been closed for over a month and the Court issued its claim construction ruling almost five months ago. Therefore, the prejudice to Defendants is significant, and Regents’ Motion should accordingly be denied.

C. All Other Factors Support Denial

While courts have found that “diligence and undue prejudice are the dispositive factors,” courts may also look to the importance of information and availability of a continuance in deciding whether to grant leave to amend contentions. *Charles E. Hill & Associates*, 2009 WL 10677610, at *2 (E.D. Tex. Apr. 17, 2009).

Regents does not even attempt establish the importance of the information at issue in its Motion. At bottom, the information Regents seeks to inject into this case adds to its already-voluminous accusations against a wide variety of 4G and 5G products, without establishing any criticality for its newly identified theories.

Nor has Regents shown that there exists the availability of a continuance. The parties have repeatedly pushed deadlines at Regents’ request, and at this point, there is no more room in the schedule (before the trial ready date) for a continuance that would allow Defendants sufficient time to address Regents’ myriad new theories.

V. CONCLUSION

For the reasons described above, Regents’ Motion should be denied.

Dated: December 27, 2022.

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of is being served upon Plaintiff's counsel of record via ECF on December 27, 2022.

/s/ Nicholas Mathews

Nicholas Mathews